



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,631	06/25/2003	Jong-Sung Jung	1349.1229	8988
21171	7590	05/16/2005		EXAMINER
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			NGUYEN, ANTHONY H	
			ART UNIT	PAPER NUMBER
			2854	

DATE MAILED: 05/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

<b>Office Action Summary</b>	Application No.	Applicant(s).	
	10/602,631	JUNG, JONG-SUNG	
	Examiner	Art Unit	
	Anthony H. Nguyen	2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 25 February 2005.  
 2a) This action is FINAL.                            2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-5,7-9 and 11-27 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-5,7-9 and 11-27 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
     Paper No(s)/Mail Date \_\_\_\_\_

4) Interview Summary (PTO-413)  
     Paper No(s)/Mail Date. \_\_\_\_\_

5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_

## **DETAILED ACTION**

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 25, 2005 has been entered.

### ***Claim Objections***

Claims 5, 13, 14, 15 and 19 are objected to because it is unclear how the predetermined distance can be in a range between 0.5 to 1 mm (claim 5) since the distance between the first paper sensor and the print head appears to be greater than the distance between the second paper sensor and the print head as shown in applicant's Fig.4. With respect to claims 13 and 19, it is unclear how the first paper sensor which is disposed between a pickup unit and a convey unit can be transversely moved or tracked its position. Additionally, the preambles of claims 14 and 15 appear to be inconsistent with the parent claim 9 since the first paper sensor is disposed between a pickup unit and a convey unit.

***Claim Rejections - 35 U.S.C. § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or  
(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 1- 4, 7-9, 11- 16, 20-22, 24, 26 and 27 are rejected under 35 U.S.C. 102(a), (e) as being anticipated by Tung et al. (US 6,435,641).

With respect to claims 1, 24 and 26, Tung et al. teaches a printer 10 having a paper edge sensing apparatus which includes a carrier 300, a print head 303 mounted to the carrier, a first paper sensor 328 mounted between the pickup unit 106 and the convey unit 308, 310 to detect a top edge and a bottom edge of a paper (Tung et al., col.5, the paragraphs 4 and 5), a paper sensor 330 mounted to the carrier at a predetermined distance from the print head and a controller 320 for controlling operation of the print head and paper print margin (Figs.4-5B, and col.5 the second paragraph). With respect to claims 9 and 27, Tung et al. teaches the steps of detecting a top edge using the paper sensor 330 and generating a print command when the top edge is detected (Fig.6A, steps 404-408) and an end command when the trailing edge is detected (Fig. 6B, steps 418 and 420). With respect to claims 10 and 11, Tung et al. teaches the steps of detecting the top edge and begin counting a start printing time

interval via the sensor 330 and the controller 320 (Tung et al., the paragraph bridging cols. 4 and 5). With respect to claim 20, Fig.6H, step 508 of Tung et al. shows the printed sheet is discharged to an output tray 16 from the printer.

### **Claim Rejections - 35 U.S.C. § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) a patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 17-19, 23 and 25 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over Tung et al. (US 6,435,641).

With respect to claims 5, 17 and 18, Tung et al. teaches all that is claimed, except for the specific predetermined distance of the paper print margin to the edges of a sheet of paper or borderless image on the paper. However, the selection of a desired predetermined distance between the print margin and the edges of a paper involves only an obvious matter of choice based upon a selection of a printing format. It would have been obvious to one of ordinary skill in the art to select a specific range of predetermined distance between the paper print margin and the edges of a sheet of paper in Tung et al. for uniform of printing on a print medium. With respect to claims 19, the step of tracking a position of a paper sensor while not specifically stated or shown in Tung et al. is necessary in a controller to providing an operative device. Thus, the step as broadly recited involves no apparent unobviouness.

***Response to Arguments***

Applicants' arguments filed on December 27, 2004 have been fully considered but they are not persuasive of any error in the above rejection.

Applicant argues that Tung is not a valid reference under 35 U.S.C. 102(b) since applicant claims a foreign priority date of August 6, 2002

It is agreed that Tung is not a valid reference under 35 U.S.C. 102(b).

However, As explained above, Tung meets the structure as recited in claims 1- 4, 7-9, 11- 16, 20-22, 24, 26 and 27 under 35 U.S.C. 102(a) and (e).

Applicant argues that Tung does not teach the use optical sensor and that there is no comparison between the media sensor and the optical sensor 330.

However, as explained above, Tung et al. teaches the use of optical sensor 330 for paper edge sensing mounted to a carrier and the second sensor 328 which is used mechanical-optical type sensor including an optical emitter/detector 334 (Tung et al., col.5, the third paragraph). Additionally, Tung et al. teaches the controller 320 for controlling movement of the printing medium or the position of the leading edge or the trailing edge of the papers 12 via the sensor or "polls sensor controller 336 to determine the state of the sensors" (Tung et al., col.5 lines 28-65). The controllers, which has a function of comparing the signals from the sensors for operating the feeding of substrates, are inherent in Tung et al. so that the device can be operated.

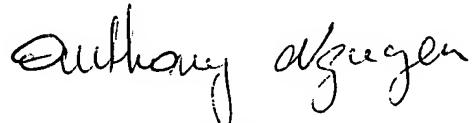
***Conclusion***

The patents to Kikuchi and Kuwano et al. are cited to show other structures and methods having obvious similarities to the claimed structure and method.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Nguyen whose telephone number is (571) 272-2169. The examiner can normally be reached daily from 9 AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld, can be reached on (571) 272-2168.

The fax phone number for this Group is (703) 872-9306.



Anthony Nguyen  
5/10/05  
Patent Examiner  
Technology Center 2800